

IN THE CLAIMS:

1. – 4. (Canceled)

5. (Currently Amended) An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide comprising an amino acid sequence selected from the group consisting of:

- (a) a mature form of an amino acid sequence selected from the group consisting of SEQ ID NOS: 1, 8, 10, 12, 18, 20, 26, 28, 34, 36, 42, 44, 50, 52, 54, 60, 62, 64, 70, 72, 74, 76, 82, 89, 91, 99 and 101 NO:75;
- (b) a variant of a mature form of an amino acid sequence selected from the group consisting of SEQ ID NOS: 1, 8, 10, 12, 18, 20, 26, 28, 34, 36, 42, 44, 50, 52, 54, 60, 62, 64, 70, 72, 74, 76, 82, 89, 91, 99 and 101 NO:75, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of the amino acid residues from the amino acid sequence of said mature form;
- (c) an amino acid sequence selected from the group consisting of SEQ ID NOS: 1, 8, 10, 12, 18, 20, 26, 28, 34, 36, 42, 44, 50, 52, 54, 60, 62, 64, 70, 72, 74, 76, 82, 89, 91, 99 and 101 NO:75; and
- (d) a variant of an amino acid sequence selected from the group consisting of SEQ ID NOS: 1, 8, 10, 12, 18, 20, 26, 28, 34, 36, 42, 44, 50, 52, 54, 60, 62, 64, 70, 72, 74, 76, 82, 89, 91, 99 and 101 NO:75, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence;
- (e) a nucleic acid fragment encoding at least a portion of a polypeptide comprising an amino acid sequence chosen from the group consisting of SEQ ID NOS: 1, 8, 10, 12, 18, 20, 26, 28, 34, 36, 42, 44, 50, 52, 54, 60, 62, 64, 70, 72, 74, 76, 82, 89, 91, 99 and 101, or a variant of said polypeptide, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence; and

(f) —

or a nucleic acid molecule comprising the complement of the nucleic acid molecule encoding the polypeptide of (a), (b), (c), or (d) or (e).

6. (Original) The nucleic acid molecule of claim 5, wherein the nucleic acid molecule comprises the nucleotide sequence of a naturally-occurring allelic nucleic acid variant.

7. (Original) The nucleic acid molecule of claim 5, wherein the nucleic acid molecule encodes a polypeptide comprising the amino acid sequence of a naturally-occurring polypeptide variant.

8. (Currently Amended) The nucleic acid molecule of claim 5, wherein the nucleic acid molecule differs by a single nucleotide from a nucleic acid sequence selected from the group consisting of SEQ ID NOS:2, 9, 11, 19, 27, 35, 43, 51, 53, 61, 63, 65, 71, 73, 75, 83, 90, 92, 100 and 102 74 and 76.

9. (Currently Amended) The nucleic acid molecule of claim 5, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence selected from the group consisting of SEQ ID NOS:2, 9, 11, 19, 27, 35, 43, 51, 53, 61, 63, 65, 71, 73, 75, 83, 90, 92, 100 and 102 74 and 76;
- (b) a nucleotide sequence differing by one or more nucleotides from a nucleotide sequence selected from the group consisting of SEQ ID NOS:2, 9, 11, 19, 27, 35, 43, 51, 53, 61, 63, 65, 71, 73, 75, 83, 90, 92, 100 and 102 74 and 76, provided that no more than 20% of the nucleotides differ from said nucleotide sequence; and
- (c) the ORF of SEQ ID NO:74 a nucleic acid fragment of (a); and
- (d) a nucleic acid fragment of (b).

10. (Currently Amended) The nucleic acid molecule of claim 5, wherein said nucleic acid molecule hybridizes under stringent conditions to a nucleotide sequence chosen from the group consisting of SEQ ID NOS:2, 9, 11, 19, 27, 35, 43, 51, 53, 61, 63, 65, 71, 73, 75, 83, 90, 92, 100 and 102 74 and 76, or a complement of said nucleotide sequence.

11. (Currently Amended) The nucleic acid molecule of claim 5, wherein the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:

- (a) a first nucleotide sequence comprising a coding sequence differing by one or more nucleotide sequences from a coding sequence encoding said amino acid sequence, provided that no more than 20% of the nucleotides in the coding sequence in said first nucleotide sequence differ from said coding sequence; and
- (b) an isolated second polynucleotide that is a complement of the first polynucleotide; and
- (c) ~~a nucleic acid fragment of (a) or (b).~~

12. (Original) A vector comprising the nucleic acid molecule of claim 11.

13. (Original) The vector of claim 12, further comprising a promoter operably-linked to said nucleic acid molecule.

14. (Original) A cell comprising the vector of claim 12.

15. – 18. (Canceled)

19. (Original) A method for determining the presence or amount of the nucleic acid molecule of claim 5 in a sample, the method comprising:

- (a) providing the sample;
- (b) contacting the sample with a probe that binds to said nucleic acid molecule; and
- (c) determining the presence or amount of the probe bound to said nucleic acid molecule,

thereby determining the presence or amount of the nucleic acid molecule in said sample.

20. (Original) The method of claim 19 wherein presence or amount of the nucleic acid molecule is used as a marker for cell or tissue type.

21. (Original) The method of claim 20 wherein the cell or tissue type is cancerous.

22. – 38. (Canceled)

39. (Original) A pharmaceutical composition comprising the nucleic acid molecule of claim 5 and a pharmaceutically-acceptable carrier.

40. – 41. (Canceled)

42. (Original) A kit comprising in one or more containers, the pharmaceutical composition of claim 39.

43. – 45. (Canceled)

46. (Original) A method for determining the presence of or predisposition to a disease associated with altered levels of the nucleic acid molecule of claim 5 in a first mammalian subject, the method comprising:

- (a) measuring the amount of the nucleic acid in a sample from the first mammalian subject; and
- (b) comparing the amount of said nucleic acid in the sample of step (a) to the amount of the nucleic acid present in a control sample from a second mammalian subject known not to have or not be predisposed to, the disease;

wherein an alteration in the level of the nucleic acid in the first subject as compared to the control sample indicates the presence of or predisposition to the disease.

47. (Original) The method of claim 46 wherein the predisposition is to a cancer.

48. – 49. (Canceled)

50. (New) The method of claim 20 wherein the cell or tissue type is from an immune-mediated disease.

51. (New) The method of claim 46 wherein the predisposition is to an immune-mediated disease.

52. (New) An isolated nucleic acid molecule selected from the group consisting of:

- a) a nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO:74, wherein said nucleic acid molecule encodes a polypeptide having a protein tyrosine kinase-like activity;
- b) a nucleic acid molecule comprising the ORF of SEQ ID NO:74; and
- c) a nucleic acid molecule consisting of an oligonucleotide of at least 15 nucleotides of the nucleotide sequence of SEQ ID NO:74 or SEQ ID NO:76, or a complement thereof.

53. (New) The nucleic acid molecule of claim 52, wherein the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:

- a) SEQ ID NO:74;
- b) SEQ ID NO:76;
- c) SEQ ID NO:140;
- d) SEQ ID NO:141; and
- e) SEQ ID NO:142.

54. (New) A method for determining the presence or amount of the nucleic acid molecule of claim 52 in a sample, the method comprising:

- (a) providing the sample;
- (b) contacting the sample with a probe that binds to said nucleic acid molecule; and
- (c) determining the presence or amount of the probe bound to said nucleic acid molecule,

thereby determining the presence or amount of the nucleic acid molecule in said sample.

55. (New) The method of claim 54 wherein presence or amount of the nucleic acid molecule is used as a marker for cell or tissue type.

56. (New) The method of claim 55 wherein the cell or tissue type is cancerous.

57. (New) The method of claim 55 wherein the cell or tissue type is from an immune-mediated disease.

58. (New) A method for determining the presence of or predisposition to a disease associated with altered levels of the nucleic acid molecule of claim 52 in a first mammalian subject, the method comprising:

- (a) measuring the amount of the nucleic acid in a sample from the first mammalian subject; and
- (b) comparing the amount of said nucleic acid in the sample of step (a) to the amount of the nucleic acid present in a control sample from a second mammalian subject known not to have or not be predisposed to, the disease;

wherein an alteration in the level of the nucleic acid in the first subject as compared to the control sample indicates the presence of or predisposition to the disease.

59. (New) The method of claim 58 wherein the predisposition is to a cancer.

60. (New) The method of claim 58 wherein the predisposition is to an immune-mediated disease.

61. (New) A vector comprising the nucleic acid molecule of claim 5.

62. (New) The vector of claim 61, further comprising a promoter operably-linked to said nucleic acid molecule.

63. (New) A cell comprising the vector of claim 61.

64. (New) A cell which expresses the nucleic acid molecule of claim 5.

65. (New) A vector comprising the nucleic acid molecule of claim 52.

66. (New) The vector of claim 65, further comprising a promoter operably-linked to said nucleic acid molecule.

67. (New) A cell comprising the vector of claim 65.

68. (New) A cell which expresses the nucleic acid molecule of claim 52.

69. (New) A pharmaceutical composition comprising the nucleic acid molecule of claim 52 and a pharmaceutically-acceptable carrier.

70. (New) A kit comprising in one or more containers, the pharmaceutical composition of claim 69.

71. (New) A nucleic acid molecule consisting of a nucleotide sequence selected from the group consisting of:

- a) SEQ ID NO:74;
- b) SEQ ID NO:76;
- c) the ORF of SEQ ID NO:74;
- d) SEQ ID NO:140;
- e) SEQ ID NO:141; and
- f) SEQ ID NO:142.